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Investigation of Environmental
Change Pattern in Japan

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(Investigation of the Ecological
Environment Index from Observation
of the Regional Vegetation cover
and Their Growing Condition)

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Investigation of the Ecological Environment
Index from Observation of the Regional Vegetation
coverd and Their Growing Condition.

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Abstract

1. Determination of the forest boundary on LANDSAT data.

a. Correspondence method of LANDSAT data on earth surface.

That is necessary to correspond LANDSAT data on earth surface in each pixel unit at the area of complicated natural features also forest vegetation types. We investigated the most effective corresponding method in narrow forest area as follow diagramme in Table 1.

As the results on this work the correlation coefficient of total pixels in a compartment of CCT out put and compartment area was $r=0.93$. Then the real correspondence accuracy in each surface was limited inner 1 pixel replacement.

b. The relation ships between MSS data response and forest cover types.
The results of the investigations of MSS response and forest type recognition shows the good identification effect on forest, field, construction and bare land in band 4 and 5. But the band 6 and 7 data have the good information for natural features.

2 kinds of artificial conifer forests, 2 types of natural conifer forest types and hard wood types are recognized by the influenced light values changes by natural feature must be make more study.

2. The application of LANDAST data from regional forest conservation plan.

The landcover information by LANDSAT data was combined with census data, topographic data or regional planning data for analysis the forest functions on social lifes and evaluate each faculties such as timber production, water shade potensialicy, elosion or flood control and recreation purposes of habitants of regional area. Then the regional forest conservation plan was prepared in north Kanto area of about 1500 km².

Every forest faculties was qualified in each 2 x 2 km quadrate unit. The land use zoneing work have been down very effectively by ADP operation. The working system shows in follow diagramme Table 2.

As the results of this work the LANDAST data show very efficient utilization faculties for analyse the land cover condition with social life of the regional habitants as the fundamental informations of basic environmental conservation and development of the wide area.

Table 1

